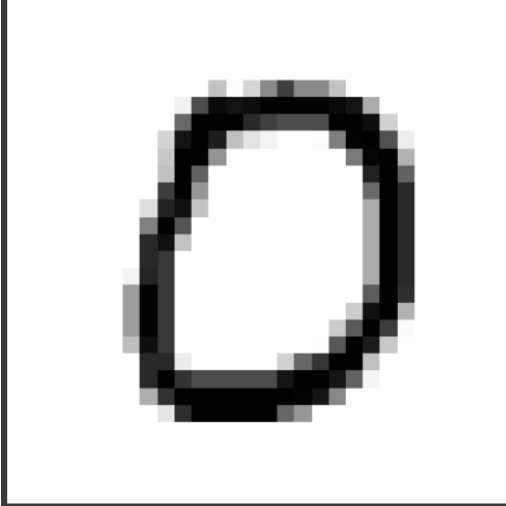


Лабораторная работа “Tensorflow”

1. Результат обучения нейронной сети на 5 эпохах.

```
Epoch 1/5
1875/1875 [=====] - 55s 29ms/step - loss: 0.2237 - accuracy: 0.9310
Epoch 2/5
1875/1875 [=====] - 56s 30ms/step - loss: 0.1309 - accuracy: 0.9609
Epoch 3/5
1875/1875 [=====] - 58s 31ms/step - loss: 0.1135 - accuracy: 0.9658
Epoch 4/5
1875/1875 [=====] - 54s 29ms/step - loss: 0.1007 - accuracy: 0.9697
Epoch 5/5
1875/1875 [=====] - 54s 29ms/step - loss: 0.0915 - accuracy: 0.9720
[0. 0. 0. 0. 1. 0. 0. 0. 0. 0.]
[1. 0. 0. 0. 0. 0. 0. 0. 0. 0.]
```



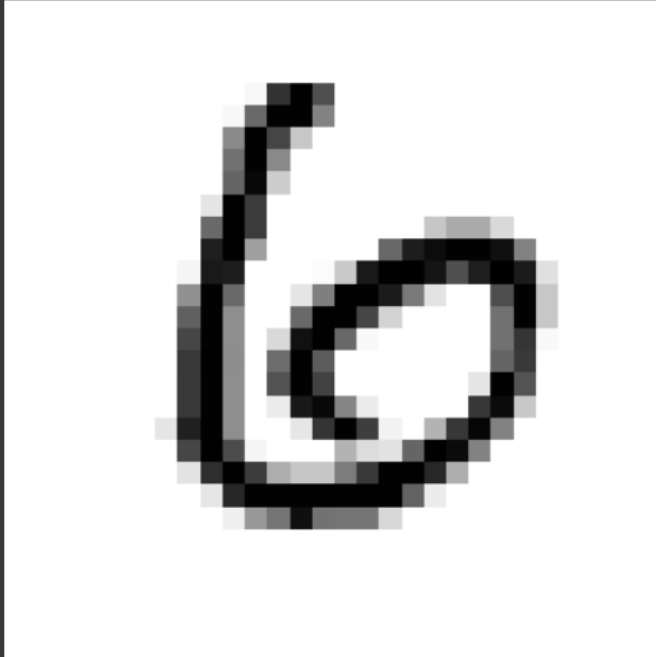
Точность обучения составила ~97%

2. Проверяем нашу обученную нейронную сеть на других изображениях.

```
[0. 0. 0. 0. 1. 0. 0. 0. 0. 0.]
1/1 [=====] - 0s 28ms/step
[[1.74722103e-07 4.36657756e-05 7.85454828e-03 6.52669650e-03
 9.98560429e-01 1.14409440e-05 4.82897121e-07 3.68007645e-02
 1.02939041e-04 1.04536355e-01]]
```



```
[0. 0. 0. 0. 0. 0. 1. 0. 0. 0.]  
1/1 [=====] - 0s 106ms/step  
[[8.0193691e-02 8.6226228e-06 6.4410217e-02 7.5076992e-04 2.4814524e-02  
3.7776737e-03 9.9974436e-01 2.8543827e-06 5.9084916e-01 6.5884466e-04]]
```



```
[0. 0. 0. 0. 0. 1. 0. 0. 0. 0.]  
1/1 [=====] - 0s 26ms/step  
[[1.0230089e-09 5.7331508e-06 1.8902065e-06 7.1948302e-01 3.2679437e-10  
9.9397355e-01 2.8995964e-11 2.8183786e-04 1.1661822e-07 3.1013885e-01]]
```

